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NASA payload part of cargo on Solo Spirit

A National Aeronautics and Space Administration (NASA) instrument package that may one day study the atmospheres of Mars or Venus will fly aboard adventurer-businessman Steve Fossett's Solo Spirit capsule as he makes his third attempt to be the first person to fly a balloon around the world solo.

NASA's Jet Propulsion Laboratory is providing the prototype instrumentation. It will measure position, temperature, atmospheric pressure, humidity and vertical wind velocity. Washington University, mission control for Fossett's attempt, invited JPL to sponsor the scientific payload. Raymond E. Arvidson, Ph.D., professor and chair of earth and planetary sciences in Arts and Sciences, is science coordinator for the payload and for Fossett's mission control in Brookings Hall.

Eventually, a version of the NASA prototype may fly in the atmosphere of Mars or Venus on an aerobot, a robotic balloon. Like Fossett's balloon, the aerobot would vary its altitude to steer through the atmosphere.

"This experiment will simulate a planetary mission with an aerobot payload mounted on the balloon," Arvidson said. "Observations to be made during Solo Spirit's flight offer an outstanding opportunity to educate the public on the characteristics and dynamics of the lower atmosphere."

Jonathan Cameron, Ph.D., is the payload technical manager at JPL. "NASA's Jet Propulsion Laboratory is actively developing a program to fly balloons in the atmospheres of other planets," Cameron said. "We are very excited with this opportunity to test this payload in Earth's atmosphere and are looking forward to the data that could be applied to our future missions."

NASA/JPL will receive raw data from the payload telemetry system through a commercial satellite system. These data will be converted into scientific measurements and relayed to the University where they will be posted on the Solo Spirit Web site so the public can follow the flight.

The science payload will gather information from the troposphere, the lowest layer of Earth's atmosphere, during a continuous two-week period as the balloon flies through mid-northern latitudes. The balloon is expected to fly at an average altitude of about 7,000 meters (24,000 feet).

A low fuel supply and other problems ended Fossett's earlier global attempt on Jan. 20, 1997. Nonetheless, on that trip, he set a new balloon distance record at 16, 673.81 kilometers (10,360.61 miles).

Fossett again will launch from St. Louis' Busch Stadium when flying conditions are optimal. This winter's flight is expected to last 15 days. The launch window opens in mid-December and closes at the end of January 1998.

"This circumnavigation of the Earth by Solo Spirit will provide valuable experience to JPL in carrying out planetary aerobot missions," said James A. Cutts, Ph.D., manager of JPL's Special Projects Office. "We will soon have the technological capability to carry out aerobot missions to circumnavigate both Mars and Venus that will collect unique scientific observations to complement the information obtained by orbiting spacecraft and surface vehicles."

After Fossett's flight, the University will publish all of the science data on NASA's Planetary Data System Geosciences Node, housed at the University and accessible on the Internet.

To follow Fossett's flight, visit www.solo.wustl.edu.

The scientific payload is managed by the Jet Propulsion Laboratory, a division of the California Institute of Technology, under contract from NASA.

— Tony Fitzpatrick

JOE ANGELES

New marketing professorship

Ambar G. Rao, Ph.D., (center) becomes the first Fossett Distinguished Professor of Marketing in the School of Business Thursday, Dec. 4. Trustee J. Stephen Fossett (left) endowed the chair and took part in the installation with Stuart I. Greenbaum, business school dean. See story on page 5.

Catholic students plan service trip to Calcutta mission

Mother Teresa is gone, but her mission lives on.

And its call for compassion toward "the poorest of the poor" soon will be carried out by a group from Washington University.

Twelve people from the Catholic Student Center (CSC), chiefly undergraduate students, have volunteered their services to Mother Teresa's Missionaries of Charity in Calcutta, India, from Dec. 20 through Jan. 16, 1998.

Plans for the trip — which follows the CSC's 1995 sojourn to rural Guatemala and a 1996 pilgrimage to East Africa — were cemented in April, five months before the nun's death in September.

"Obviously we were excited about the prospect of meeting Mother Teresa," said Kelly Garrity, the CSC's coordinator of social justice and community service programs. "It would have been great and

Continued on page 4

Happy holidays

The Record staff sends best wishes for the holidays and a refreshing winter break. This issue is the last for 1997; publication resumes Jan. 15, 1998.

Architecture students design Forest Park pavilions for new millenium

Through majestic towers, hovering domes and futuristic geometric structures, graduate architecture students' designs for pavilions commemorating the 1904 World's Fair adapt an historic building form for the next century.

The 16 students, who each designed a pavilion to mark the 100th anniversary of the fair, began by researching the original site of the fairgrounds in Forest Park, the role of pavilions as cultural icons and the latest building and exhibition technology. Their projects depict pavilions that could be constructed in 2004 at the site where the original 1904 pavilion still stands.

"The hypothetical designs for the 2004 pavilions both focus back on the architectural, cultural and global significance of the World's Fair, and herald the new millennium," said Associate Professor of Architecture Paul Donnelly, who taught the design studio. "The project also presents an opportunity to explore new technology as it relates to an architectural environment and to demonstrate the use of state-of-the-art technology in a sustainable manner."

The students' theoretical designs will be formally exhibited in Givens Hall during an all-day review Dec. 19 and displayed next spring on the school's Web site at http://www.arch.wustl.edu.

Graduate student Jeff Dillard's designs call for a new form of building material — cast steel — to create a 40-foot-tall domed pavilion. The strength of the material will allow his dome, made of thin, connecting rings of cast steel, to span 400 feet. The elegant structure follows the curve of a small lake on the site and opens up to the sky.

"The 1904 World's Fair was about rational thought and man's place in nature," he said. "I'm trying to create a more organic approach with elements that interact directly with the site."

The designs of graduate student Rohn MacNulty experiment with geometric, sculptural shapes using principles of compression and tension. His structures — which give the impression of looking through a continuous series of box kites, each on a twisted axis — will be used to create a bridge to his pavilion.

"The tensegrity structures have been used experimentally in sculpture but not for buildings," MacNulty said. "I chose to use this form for its spanning capabili-

Continued on page 6

In this issue ...

Coming up ...

Rhodes Scholar named

At press time, the Record received word that Narayanan "Bobby" Kasthuri, a first-year School of Medicine student, was one of 32 Americans to receive a Rhodes Scholarship to Oxford University, England.

The Jan. 15, 1998, issue of the Record will include a full-length article about Kasthuri and his selection.

Medical Update

Ambulatory Care Center will offer novel approach to patient care

In patient satisfaction surveys, the care provided by the School of Medicine's clinical faculty overwhelmingly is ranked as excellent. Easy access to that high-quality care, however, is noted as an opportunity for improvement by consumers seeking convenient out-patient services.

That's why creating a patient-focused environment in which ambulatory patients can park conveniently, see their physician and receive diagnostic testing and ancillary care services is the cornerstone of the new Ambulatory Care Center (ACC) on the Medical Center campus.

The ACC will consist of a new 14-story building on the corner of Forest Park and Euclid avenues, adjacent to the new Cancer Center. (The two centers will share a lobby and parking facilities.) The ACC is scheduled to open in late 2000.

"The Ambulatory Care Center is critically important to the delivery of high-quality care that is patient-focused and easily accessible," said James P. Crane, M.D., associate vice chancellor for clinical affairs and chief executive officer of the Faculty Practice Plan (FPP). The FPP was established earlier this year to oversee the medical school's clinical practice.

Crane, who also is a professor of obstetrics and gynecology, added: "We believe the ACC will enhance not only our patient care but also the School's educational and clinical research missions."

Currently, adult patient services are offered in 32 areas of the sprawling Medical Center. Because approximately one-third of patients see more than one health-care provider and/or receive ancillary medical services, they sometimes are required to walk several blocks between appointments. Consolidating these services into one location, easily accessed by patients and organized in a patient-focused fashion, has been the primary driver of the ACC planning process.

The ACC has been organized into multidisciplinary clinical centers, which group together specialties that tend to see the same types of patients. For example, the lung center will include specialists in pulmonary medicine, allergy and immunology, thoracic surgery and lung transplantation. Associated ancillary services, such as chest X-ray and pulmonary function testing, will be located in the physician practice area.

Planning the ACC has been a cooperative effort of clinical faculty and nursing staff along with medical school and Barnes-Jewish Hospital administrators. The first team, the FPP's Ambulatory Operations Design Team (AODT), worked from November 1996 to February 1997 to design an operations model for the ACC. This 17-member team included 12 active clinical faculty. It developed a model of 16 multidisciplinary, patient-focused clinical centers, such as women's health, musculoskeletal, neuroscience, gastrointestinal, spine, cardiovascular and lung. Because the clinical centers were designed to be diagnostic-based rather than departmentally based, the AODT also designed an administrative structure for support staff, which defines how the FPP will manage the clinical practices.

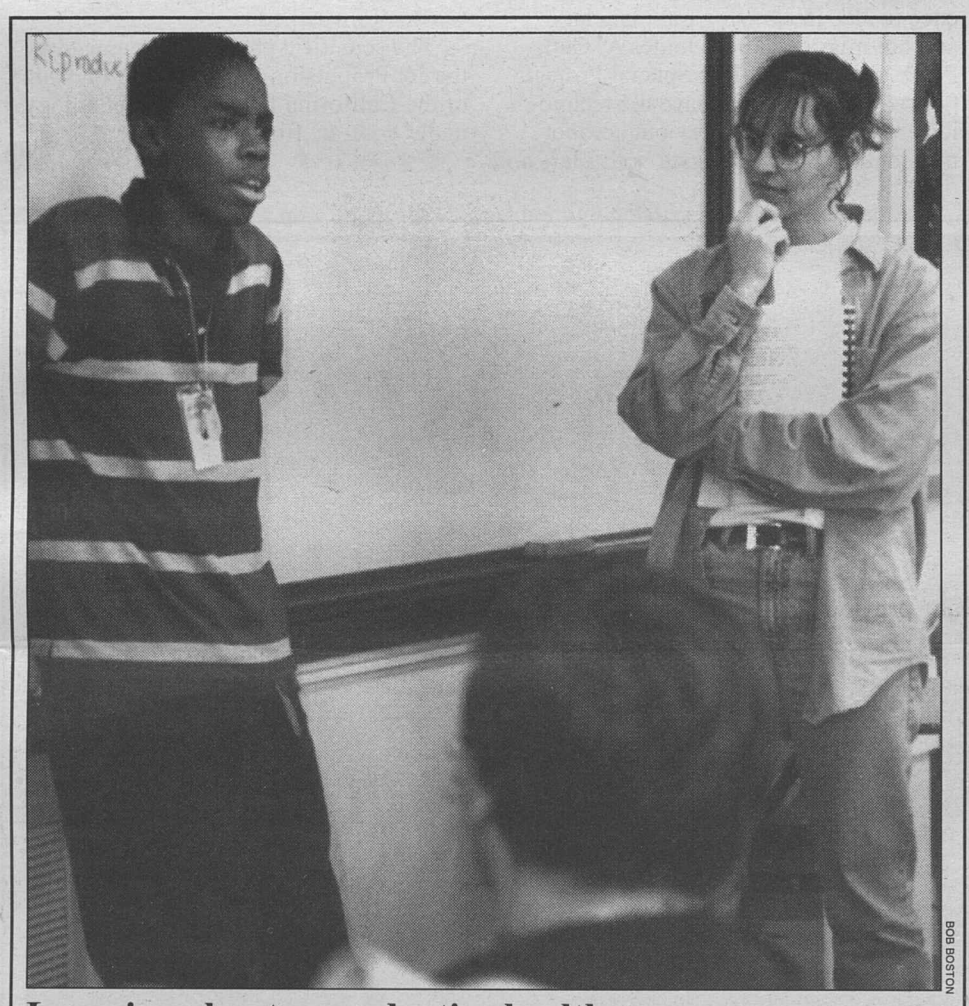
The same group of physicians who served on the AODT became the core members of the ACC facility programming committee, which worked from February through May 1997 to develop a standard facility model for the FPP's clinical centers. This committee developed a standard space plan for use by each center, with recommendations for reception and waiting areas, exam rooms and work areas for clinicians and support staff. This model was turned over to clinical center work groups. Made up of representatives from each specialty, these groups recommend modifications within the standard space to fit their particular center's needs.

In addition to the clinical centers, areas for diagnostic and ancillary services also are being designed for the ACC to ensure easy patient and physician access. A new, modern outpatient surgery center also will be housed in the ACC. As with the clinical center planning process, many clinical faculty have been involved in the planning of these areas. To date, more than 100 faculty members have provided input into ACC planning.

"We provided a superstructure and practice model," said Michael E. Cain, M.D., co-chair of the AODT, chair of the ACC programming committee and the Tobias and Hortense Lewin Professor of Cardiovascular Diseases. "We painted a picture in bold strokes of how the facility would run and how faculty would interact with divisions and departments. Additional faculty who will see patients in the facility are providing key input into the specific design of their clinical centers."

The result of all of this faculty planning, Cain said, will be "a truly spectacular, novel and efficient building that will allow a multidisciplinary and specialty approach to patient care."

— Brenda Murphy



BOB BOSTON

Learning about reproductive health

As part of a Reproductive Health Education Program (RHEP) class at Ferguson Middle School, eighth-grader Joseph Jones tells his classmates and RHEP volunteer Shelby Sullivan (right) about baby-sitting for his sister's child. RHEP was created in 1992 by the School of Medicine and Ferguson Middle School. The goal of the curriculum, which is taught by medical students and Ferguson teachers, is to curb teen pregnancy rates and the incidence of sexually transmitted diseases.

Depression study recruiting volunteers

Researchers in the Department of Psychiatry are recruiting volunteers for a study on the biological basis of depression.

They are looking for people 18 or older who are suffering from serious depression. Volunteers must not be taking any medications.

Symptoms of serious depression include feeling sad or unhappy most of the time, regularly waking in the middle of the night or very early in the morning, feeling physically slowed or very restless, experiencing loss of pleasure or interest in most things and losing weight.

The study involves medical tests and procedures, including blood drawing and the evaluation of hormone systems. Study participants will be paid up to $500 for their participation and also will receive a free evaluation from a psychiatrist. Additionally, referrals to treatment will be provided.

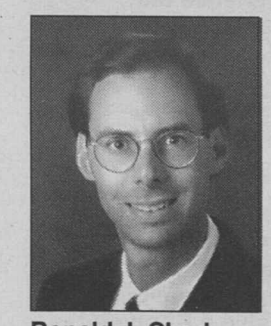
The study is directed by Joel A. Posener, M.D. For more information, call 877-0719.

Three are appointed assistant vice chancellors

Ronald J. Chod, M.D., Jeffrey A. Lowell, M.D., and Joan M. Podleski have been appointed assistant vice chancellors for clinical affairs at the School of Medicine.

Chancellor Mark S. Wrighton announced the new appointments.

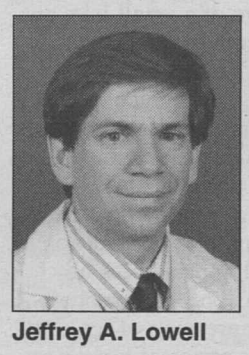
As assistant vice chancellor, Chod will enhance the School of Medicine's clinical practice by helping develop a number of programs. These will include outreach opportunities for faculty physicians and partnering between faculty and community providers. Chod also serves as Director of Network Development for the Washington University Physician Network and as executive director of Practice Plan Development for the Faculty Practice Plan.



Ronald J. Chod

Chod, an assistant professor of obstetrics and gynecology, previously served as assistant dean for clinical affairs and vice president of clinical affairs at BJC Health System. He earned his medical degree in 1983 from the University of Texas Southwestern Medical School in Dallas. He completed his residency in obstetrics and gynecology at Jewish Hospital in 1987. He then maintained a private practice in St. Louis until he joined the faculty in 1995.

Lowell, an assistant professor of surgery and of pediatrics, also serves as executive director of Medical Services for the Faculty Practice Plan. As assistant vice chancellor for clinical affairs, Lowell is responsible for optimizing clinical outcomes, maximizing the efficiency of patient care and developing systems to document and monitor clinical outcomes. He will work closely with Barnes-Jewish Hospital and BJC Health System.



Jeffrey A. Lowell

Lowell graduated from Yale University School of Medicine in 1985. He joined the medical school's faculty in 1994 following a fellowship in adult and pediatric transplantation at the University of Nebraska Medical Center. He continues his work in transplantation as director of the intestinal transplant program at Barnes-Jewish and St. Louis Children's hospitals.

As assistant vice chancellor for clinical affairs, Podleski will continue to be involved in analyzing and planning the reorganization of clinical services and the creation of an integrated professional practice plan. Among her many roles will be developing strategies, timelines and practice models for ambulatory operations and coordinating clinical operations with BJC. Podleski is also executive director for Clinical Operations for the Faculty Practice Plan.

Joan M. Podleski

Formerly, Podleski was business manager in neurological surgery. She received a bachelor's degree in history, political science and paralegal studies from Webster University in 1991.

Record

Editor: Betsy Rogers, (314) 935-6603, Campus Box 1070

Associate vice chancellor, executive director, University Communications: Judith Jasper

Executive editor: Susan Killenberg

Editor, medical news: Diane Duke, 286-0111, Medical School Box 8508

Assistant editors: Martha Everett, 935-5235 David Moessner, 935-5293

Production: Galen Harrison

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Washington
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Washington People

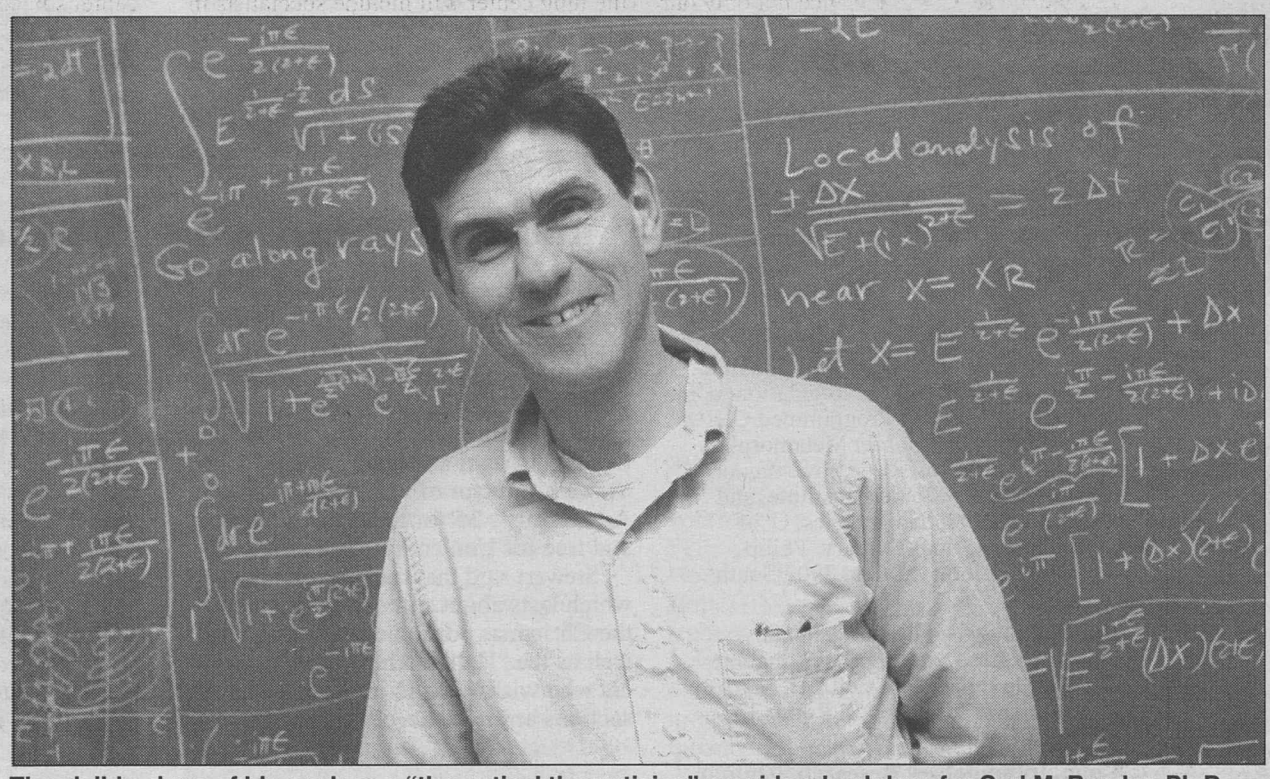
Bender mixes humor with math and physics

Thanks to a group of sharp-minded, hardworking students, Carl M. Bender, Ph.D., has purged many mistakes from his book-in-progress. "I'm handing it out chapter by chapter as I write it," said Bender, professor of physics in Arts and Sciences. "It makes the course more interesting, the book better and the students eligible for rewards. Last night I received e-mail from someone who is getting two extra points for finding an error."

The textbook in the making, "Partial Differential Equations for Scientists and Engineers," presents advanced mathematics to aspiring physicists, engineers, and mathematicians. "The publication date is June '98, when I finish the course," Bender said. "It'll be the big bang."

It's vintage Bender. Puns and cornball jokes. An office annotated with cartoons and creative signage. A piece of paper taped to one wall reads "dry paint." The levity lightens up the highly complex, head-spinning, equation-crunching world of modern physics. "This is fancy stuff," said Bender, "a field where the task of writing down a single meaningful equation is intensely difficult."

A theoretical and particle physicist, Bender works primarily in quantum mechanics, the physics of very small, submicroscopic or atomic particles, and in particle physics and quantum field theory. Quantum mechanics underlies nearly all modern science and technology; it governs the essential components of computers and TVs and serves as a basis for chemistry.



DAVID KILPER

The visible signs of his work as a "theoretical theoretician" provide a backdrop for Carl M. Bender, Ph.D.

Particle physics is devoted to identification and description of matter and its properties, such as mass and charge, and what holds it together.

"There are two kinds of theoreticians," Bender explained. "The phenomenological theoretician talks to scientists who design the experiments. The theoretical theoretician stands back from the theory to think about its nature and formulation."

Bender serves in the latter capacity, exploring the boundary between physics and his passion, mathematics. "I use science as a way of generating the problems," he said.

Bender's work has generated a great deal more. "Carl is one of our leading lights in the department," said Clifford M. Will, Ph.D., professor and chair of physics. "Not only is he a world-class physicist, but also one of the best teachers on campus. He excites and inspires students. He serves on many University committees and has made Washington University known throughout America for its high and consistent performance in the Putnam competition."

A Putnam coach for 20 years, Bender and mathematics Professor Richard Rochberg, Ph.D., helped place the University among the top three schools of the 400 U.S. and Canadian institutions participating in the prestigious mathematical examination for undergraduates. In the past two decades, the University has placed first and second four times each.

Also the ombudsman for the College of Arts and Sciences, Bender serves on a half dozen University and departmental committees.

Working in England and Israel

He has earned many distinctions, among them a Fulbright fellowship to lecture and conduct research at Imperial College in London from summer 1995 through summer 1996. He received additional support from the Particle Physics and Astronomy Research Council (PPARC), the British equivalent of the National Science Foundation (NSF).

"It was an amazing and wonderful time," recalled Bender, who had traveled to Imperial College in 1974 as a visiting fellow and again in 1986 as a visiting professor. "It gave me the chance to talk about my work and to collaborate with others. What great fun to sit all day and think about problems, work straight through lunch, not even put down the pencil.

"I talked with many students and must have solved 10 or 12 different problems, two or three times my normal annual production," he added.

During his trip abroad, Bender also taught and conducted research at Technion-Israel Institute of Technology in Haifa, Israel, on a Lady Davis Fellowship, a coveted award given to only a few visiting scholars each year for study in Israel. Another highlight was a month spent at Cambridge University's Newton Institute, which hosted a six-month conference on hyperasymptotics, a field of mathematical physics that Bender helped create through his early work on perturbation theory.

"Perturbation theory involves an organized mathematical set of procedures for solving very difficult problems that bear similarity to solvable ones," Bender explained. "For example, one problem we can solve is the shape of Earth's orbit as the planet moves around the sun, but only if there are no other planets. The pull of gravity from the other planets disturbs the calculations. These problems can be solved approximately but never exactly."

Bender's first book, "Advanced Mathematical Methods for Scientists and Engineers" (1978, McGraw-Hill), co-authored with Princeton Professor S.A. Orszag, has become the classic work on perturbation theory and is used by universities stretching from Harvard to California Institute of Technology. Bender credits his wife, Jessie, "a highly talented editor," with contributing to the book's success.

"I grew up quantitative," Bender said, moving along a banquet of published papers that runs nearly the length of his Compton Hall office. He points out an article co-authored with Jade Vinson, now attending Princeton on a National Defense Science and Engineering Graduate fellowship.

Vinson worked with Bender — "a mentor I still go to for advice," Vinson noted — beginning the summer after his freshman year. "He's energetic, patient, and open-minded," Vinson said of his former professor. "He is known for his deep involvement with undergraduates."

Another paper presents a methodology for studying a specific geyser. Bender co-authored this article with his son, Daniel, a third-year graduate student studying the history of the American labor movement at New York University. (His older son, Michael, will receive a Ph.D. in computer science from Harvard next spring, when he plans also to marry.)

> "Not only is he a world-class physicist, but also one of the best teachers on campus. He excites and inspires students."
>
> ***— Clifford M. Will, Ph.D.***

"I always thought I would be a chemist. In high school, I had a lab in my basement, where I was always discovering things," Bender related. "My father was a physics teacher who moonlit as a TV repairman. I was the radio component of his business."

As a freshman at Cornell University, Bender immediately enrolled in an upper-level chemistry course and earned the highest grade in the class. He excelled in every course he took. Thrilled by the discovery of a water-soluble glass he developed over the subsequent summer, Bender knocked on a professor's door to share the find.

"I talked about the applications the glass might have in medical equipment," Bender recalled. "The professor looked up at me and said, 'Why don't you check it out at the library?' I lost it then. They were too absorbed with their graduate students."

Yet for every disappointing professor Bender encountered, he found a prize. At Cornell, it was Ken Greisen, who advised Bender, by now disenchanted with experimental chemistry, to try physics. "I was just blowing with the wind then, taking courses randomly, loving the science and math," Bender said. "During graduation week, I got a call from the math department asking if I was a math major. I didn't know."

Bender graduated summa cum laude with a bachelor's degree in physics and entered Harvard University "as a serious theoretical physicist." Harvard professor Julian Schwinger had won the 1965 Nobel Prize for Physics (with Richard Feynman and Sin-Itiro Tomonaga), and Bender was hoping to work with him.

Disappointment closed in on the prospect, however, as Schwinger never seemed accessible. After several weeks, Bender made it into his office, but the encounter was all too brief and the result a letdown. "I asked the great man my question," said Bender. "He answered, 'I don't know.'"

Enter T.T. Wu, applied mathematician and physicist, who became Bender's thesis adviser, collaborator and co-author on several papers. "Wu taught me how to think about a problem, how to attack the unknown," Bender said. "It was an approach more than anything. He showed me how to shake hands with a problem."

Following a year of postdoctoral work at Princeton, Bender took a position in the applied mathematics department at the Massachusetts Institute of Technology, where he stayed for seven years. But when Washington University offered him a position, he left MIT. "My productivity increased here," he said, "because I spent less time worrying about the noise around me. I found room in my mind to work on larger and more long-range problems. The classes were smaller and the students brighter. My whole life changed."

As a result, the lives of others have changed, too. Junior Michael Lamar recalled one of Bender's lectures presented when he visited the University as a high school senior. "He [Bender] captivated the audience and led to my enrollment here," said Lamar, a student in Bender's advanced mathematics course. "He's an excellent teacher who livens the moment."

Applying physics to social issues

Bender also teaches "Physics and Society," an examination of what distinguishes science from antiscience. An advocate of public transportation, population control and generally "a more quantitative approach to environmental problems," Bender approaches public policy issues with vast knowledge and great resolve.

He is a fellow of the American Physical Society, serves on professional journals' editorial boards and has been a consultant at Los Alamos National Laboratory in New Mexico since 1979. ("I don't make bombs," he quickly interjected.)

Bender's research has been funded annually by the Department of Energy since he joined the University two decades ago. He has built a vibrant area in theoretical physics that now includes five professors, a research professor and a postdoctoral researcher. Two additional scientists who have received funding to work specifically with Bender's group will arrive next year.

Bender took from his shelf a yellowed bound copy of his thesis on the analytic properties of the anharmonic oscillator. "You'll like appendix H," he said, handing over the volume.

A chess game?

Bender laughed. "It took a year and a half to beat my opponent. It was an international postal chess competition, a pitched battle that I'd just won, and I was proud. I thought, why not throw it in? I dedicated it to the brilliant physicist Lord Rayleigh for not having solved my thesis problem first."

What did the dissertation readers make of this?

"No one caught it, which made me wonder if they'd read it [the thesis]," said Bender. "I showed them afterward."

And ...

"They laughed, too."

— Cynthia Georges

Calendar

Visit Washington University's on-line calendar at
http://cf6000.wustl.edu/calendar/events/v1.1

Dec. 11–Jan. 17

Exhibitions

"December Graduates Exhibition." Through Dec. 19. Bixby Gallery. 935-4643.

"Powerful Grace Lies in Herbs and Plants: A Joint Exhibit on Herbal Medicine." Sponsored by Missouri Botanical Garden Library and Bernard Becker Medical Library. Through April 1998. Seventh floor, Bernard Becker Medical Library, 660 S. Euclid. 362-4235.

"The Dual Muse: The Writer as Artist, The Artist as Writer." Through Dec. 21. Gallery of Art, upper gallery. 935-5490.

"The Seven Deadly Sins." Woodcuts by Beat poet and author William S. Burroughs. Through Dec. 21. Gallery of Art. 935-4523.

"Una Selva Oscura." The work of Tom Phillips. Through Jan. 2, 1998. Special Collections, level five, Olin Library. 935-5495.

Music

Friday, Dec. 12

8 p.m. Washington U. Opera performance. "An Evening of Mozart." Jolly Stewart, dir. (Also Dec. 13, same time) Umrath Hall Lounge. 935-4841.

Sunday, Dec. 14

3 p.m. Annual sing-along: Handel's "Messiah." John Stewart, dir. Cost: $5, free for WU students. (Wassail and carol singing follows at the Catholic Student Center, 6352 Forsyth.) Graham Chapel. 935-4841. *(See story on this page.)*

Lectures

Friday, Dec. 12

9:15 a.m. Pediatric Grand Rounds. "Genetics of Diabetes and the Human Genome Project." M. Alan Permutt, prof. of medicine and dir., Diabetes Research and Training Center. Clopton Aud., 4950 Children's Place. 454-6006.

Noon. Cell biology and physiology seminar. "Fibroblast Growth Factor Signaling in Development." David M. Ornitz, assoc. prof. of molecular biology and pharmacology. Room 426 McDonnell Medical Sciences Bldg. 362-6950.

Monday, Dec. 15

Noon. Molecular biology and pharmacology seminar. "Steroid Regulation of Gene Expression and Programmed Cell Death During *Drosophila* Metamorphosis." Carl Thummel, assoc. investigator, Howard Hughes Medical Institute, and assoc. prof. of human genetics, U. of Utah. Pharmacology Library: Philip Needleman Library, Room 3907 South Bldg. 362-2725.

4 p.m. Biology seminar. "Diabetic Yeasts: Glucose Sensing and Signaling in a Simple Eukaryotic Cell." H. Mark Johnston, prof. of genetics. Room 322 Rebstock Hall. 935-7569.

4 p.m. Immunology Research Seminar Series. "Molecular Basis of Allergic Disorders." Talal A. Chatila, assoc. prof. of pathology and of pediatrics. Eric P. Newman Education Center. 362-2763.

Tuesday, Dec. 16

Noon. Molecular microbiology/microbial pathogenesis seminar. "Cellular Subversion and the Pathology of Pertusis." William E. Goldman, assoc. prof. of molecular microbiology. Cori Aud., McDonnell Medical Sciences Bldg. 362-8873.

Wednesday, Dec. 17

8 a.m. Obstetrics and Gynecology Grand Rounds. "Medico-Legal Issues in Obstetrics and Gynecology." Timothy C. Philpott, chief resident, obstetrics and gynecology. Clopton Aud., 4950 Children's Place. 362-7139.

Friday, Dec. 19

9:15 a.m. Pediatric Grand Rounds. "Pathogenesis and Treatment of Cystic Fibrosis." Arnold Smith, prof. and chair, molecular microbiology and immunology, U. of Mo.-Columbia. Clopton Aud., 4950 Children's Place. 454-6006.

Noon. Cell biology and physiology seminar. "Acyl Tales of G-protein Signaling." Maurine Linder, asst. prof. of cell biology and physiology. Room 426 McDonnell Medical Sciences Bldg. 362-6950.

Friday, Jan. 2

6 and 8:30 p.m. WU Association Travel Lecture Series. "Finland — Star of Scandinavia" by Jim Cole. Cost: $4.50. Graham Chapel. 935-5212.

Monday, Jan. 5

Noon. Molecular biology and pharmacology seminar. "Transcriptional Regulation of the Osteocalcin Promoter: Convergence of Msx2- and FGF-regulated Osteoblast Gene Expression." Dwight Towler, asst. prof. of medicine and of molecular biology and pharmacology. Pharmacology Library: Philip Needleman Library, Room 3907 South Bldg. 362-2725.

Monday, Jan. 12

Noon. Molecular biology and pharmacology seminar. "Transcriptional Control of *Drosophila* Embryogenesis." Mike Levine, prof. of genetics, molecular and cellular biology dept., U. of Calif. at Berkeley. Cori Aud., 4565 McKinley Ave. 362-2725.

Annual 'Messiah' sing-along set for Dec. 14

Vocalists of all stripes are invited to participate in the Department of Music in Arts and Sciences' traditional sing-along of George Frideric Handel's oratorio "Messiah." The concert takes place at 3 p.m. Sunday, Dec. 14, in Graham Chapel and is directed by John Stewart, director of vocal activities. Admission is $5 for the general public and free for University students.

Stewart said that the performance, which lasts about an hour, will include the Christmas portion of "Messiah" as well as the "Hallelujah Chorus." Singers who wish to do so may sit in special sections arranged according to vocal part (soprano, alto, tenor, baritone), and copies of the music will be available for those who do not bring their own scores. Non-singers also are encouraged to attend.

The solo portions of the oratorio will be sung by Lori Barrett, master's candidate in vocal performance, soprano; Denise Stookesberry, instructor in voice, alto; Paul Blecha, tenor; and sophomore Mark Kent, baritone.

Following the performance, the audience is invited for wassail and informal carol singing at the Catholic Student Center, 6352 Forsyth Blvd.

For more information, call 935-4841.

Catholic students plan mission trip — *from page 1*

powerful to work with her. So there is a sense of disappointment and loss. But in the time since she died, all the documentaries and stories have renewed our reflection and given us a lot more focus on her motivations. I'm sure her spirit will be alive there."

The charge, simply, is to help the helpless. In Calcutta, the Missionaries of Charity operate several different homes — for children, for the dying, for lepers — each tendering unconditional love and comfort. At the Home for the Dying, for instance, missionaries go into the streets of Calcutta and find people, literally in the gutters, suffering through their last days. "They peel them off the street and just love them," Garrity said. "They allow them to die with dignity."

It is at one, if not all, of these homes that the group from the CSC will carry out its mission. "We're surrendering ourselves to whatever they need," Garrity said. "It's a very hands-on kind of thing. We're scared and excited. It's a huge challenge."

The quest goes well beyond the four-week voyage. "One of the challenges is how to bring the experience home and share it," Garrity said. "We're trying to learn from the poor how to love each other and to pass that message on to those who aren't on the trip."

This process has already begun, both informally and formally. Since the summer, the group has gathered weekly, taking turns leading soul-searching discussions focusing on the meaning of a single word, like "poverty" or "hope." The group also has met with a group of eighth-graders from Chaminade College Preparatory School "to plant a little seed there," Garrity said.

While the Calcutta trip is the largest in scope, it's just one of several the CSC sponsors throughout the school year. Last spring, a group traveled to a Navaho reservation in Tohatchi, N.M. Before that, it was a trip to inner-city Denver. This coming spring break, a team will go to the Texas-Mexico border. Then it will be back to the Southwest at the end of the school year.

"The trips are life-changing experiences," Garrity said. "The whole journey — the commitment, the preparation, the process of bringing it all home. Students who go end up changing what they want to do with their careers. All the seniors who went on the trip to Africa have since given at least one year of service. It never turns out to be quite what you expect."

Already, the journey to India has taken on different ramifications. "It's kind of grown into something more than we've anticipated," Garrity said. "I'm sure it will grow even further after we get there."

— David Moessner

Innovative class gives undergraduate musicians professional experience

If performance is the heart of music, then students in the Washington University Jazz Combo are getting a sound introduction to the syncopated rhythms of jazz's cardiovascular system.

Designed to let students earn academic credit while gaining the "gigging" experiences of a professional group, the Jazz Combo is one of several recent initiatives in the Department of Music in Arts and Sciences designed to raise jazz's profile on campus. In addition to long-standing projects like the Jazz Band and the Vocal Jazz Ensemble, next semester the department will add a jazz minor to its curriculum, and William J. Lenihan, teacher of applied music, will offer a course on jazz improvisation.

"A number of students are deeply interested in jazz, students with a lot of talent and drive," said Hugh Macdonald, Ph.D., professor and chair of music. "The minor also provides opportunities for interdisciplinary collaboration with African-American studies, American culture studies and anthropology. And with the arrival last year of ethnomusicologist Ingrid Monson, assistant professor of music, we seemed well placed to offer it."

The Jazz Combo — a trio featuring sophomore Ben Looker, piano, and non-roster students Brian Goddard and Evan Howard, bass and drums, respectivley — was organized by Looker and operates under the auspices of the music department's Small Chamber Ensemble. But when it comes to finding off-campus bookings, said Robert L. Hughes Jr., a saxophonist and doctoral candidate who serves as the group's faculty coach, the combo is responsible for doing its own legwork.

"There have been other student groups who'd try to find outside work," said Hughes. "In 1990, there was a jazz quintet, and today, there must be dozens of alternative bands. But I think the reason the Jazz Combo has had such success in finding venues is simply that Ben is good about returning phone calls and showing up on time and being ready with business cards when people ask for them. Which is really just a fairly normal way to build a business."

Averaging one or two concerts per week, the trio has developed a steady clientele of restaurants (Jo-Jo's, Porter's Cigar Bar), galleries (The Gallery of Art), private parties, weddings and special events, including a $75-per-head birthday party/fund-raiser for St. Louis Mayor Clarence Harmon and the St. Louis-based educational organization OASIS' 15th anniversary celebration, where the combo appeared with Broadway star Carol Channing.

Looker concurs that legwork and perseverance are the keys to finding bookings. "Last semester, even before we'd organized into a class, we started calling around looking for gigs," he said. "We did volunteer work and sent cards and demo tapes to restaurants, art galleries and country clubs, just trying to get some momentum going. And once people started seeing us perform, it became a word-of-mouth thing."

In mid-November, the combo staged a well-attended concert for the music department, which was followed by a jam session open to all. Ingrid Monson — who joined the band on trumpet — credits the event's success to Looker's drive and determination.

"It takes a lot of work and initiative to get that kind of thing going," she pointed out. "Ben was really the one lighting a fire under people to come out and play."

Looker, a Mylonas Scholar in the humanities who plans to double major in music and urban studies, has found also that his gigs with the Jazz Combo provide a welcome, if unanticipated, link between his interests.

"Unfortunately a lot of students spend all their time on campus," he explained. "They don't get to see much of St. Louis or the surrounding area. The Jazz Combo takes us into all sorts of different situations and parts of the city we'd never experience otherwise."

Looker grinned. "And, of course, we get paid for it."

— Liam Otten

Ambar Rao holds new Fossett chair in Olin School

Ambar G. Rao, Ph.D., was installed as the first Fossett Distinguished Professor of Marketing in the John M. Olin School of Business Thursday, Dec.4.

The endowed professorship is the gift of J. Stephen Fossett, an explorer and successful businessman who received a master of business administration degree from the business school in 1968, Chancellor Mark S. Wrighton announced. Fossett is a trustee of the University and a member of the Olin School's advisory council.

"We're not only fortunate that Steve Fossett has generously created this professorship," said Wrighton, "but also that we have someone as eminently qualified as Ambar Rao to fill it."

Stuart I. Greenbaum, Ph.D., dean of the business school, added: "We deeply appreciate this important show of support from Steve Fossett, which helps attract and retain world-class faculty at the John M. Olin School of Business."

Rao held endowed professorships at the University of Toronto and the University of Arizona before joining the business school faculty this year. He is teaching marketing analysis and marketing policy and pursuing research interests in those areas, as well as in product strategy. Rao, author of three books and marketing consultant for several Fortune 500 firms, received a bachelor of technology degree from the Indian Institute of Technology and a master of science degree from Case Western Reserve University. His doctoral degree is from the University of Pennsylvania.

"I have many ties to Washington University," said Fossett, chairman of Lakota Trading Inc., a Chicago-based stock options trading firm, and president of Marathon Securities Inc., a member of the New York Stock Exchange, "and I have great confidence in the Olin School."

Known for setting world records in ballooning and sailing, Fossett is preparing to launch his third attempt to be first to circumnavigate the globe in a balloon. He plans to lift off from St. Louis' Busch Stadium sometime between mid-December and mid-January, depending on weather conditions. The University's Brookings Hall will be mission control for the venture.

DAVID KILPER

From left, undergraduates Katie Berwin and Judd Bowman and graduate student Curt Niebur pore over maps for the Solo Spirit round-the-world balloon flight.

Students are key players in Solo Spirit mission

When Judd Bowman turned 13, his parents presented him with an unusual birthday present: a balloon ride over the rolling Iowa countryside near Ames.

"It was the Iowa State University balloon, and we took off from the football stadium," recalled Bowman, now a senior physics/electrical engineering major. "It felt pretty special to see the town, our home and the farm fields. The realization hit me very quickly that there's nothing but space between the little basket and the ground. My dad was with me, and we stayed up for about two hours. I remember when it was over, my head itched from all that heat from the burner."

Little did he guess that he would play a role eight years later in Steve Fossett's quest to become the first person to fly around the world in a balloon.

Bowman is one of about 15 Washington University undergraduate students who have assignments either in mission control in Brookings Hall or in the Planetary Data System Geosciences Node on the fourth floor of McDonnell Hall. Graduate students will swell the student total to about 20. Students will volunteer their time to work in mission control, tracking the flight on an enormous map of the world and helping get information to the media.

"The mission is an excellent opportunity for students to get involved in a scientific project, as well as an opportunity to reach the public," said Raymond E. Arvidson, Ph.D., professor and chair of earth and planetary sciences in Arts and Sciences. Arvidson is science coordinator for both mission control and the payload that Fossett will fly for the National Aeronautics and Space Administration's Jet Propulsion Laboratory (NASA/JPL). *(See story on page 1.)*

"This is also a rare chance for students to experience the kind of excitement a scientific mission can generate among the public and the media," he added. "Most science doesn't draw this much attention. But when students can feel they have a part in something globally significant, they'll know the importance of teamwork and diligence. Often, you can't get that strictly through classroom studies."

Attached to the exterior of Fossett's balloon capsule will be a science payload and telemetry system that will provide continual measurements of position, temperature, atmospheric pressure, humidity and vertical wind velocity.

NASA/JPL will receive raw data from the telemetry system through a commercial satellite. The data will be converted into scientific measurements at JPL and sent to the University where they will be posted on the mission Web page for all the world to see.

This is where Bowman, environmental studies senior Katie Berwin and earth and planetary sciences graduate student Curt Niebur come into the picture.

The students work with Arvidson and his veteran team of support researchers in earth and planetary sciences: Edward Guinness, senior research scientist; Susan Slavney, systems programmer analyst; and Thomas Stein, computer systems coordinator. Niebur is supervisor of student help. Bowman works on Web site data from NASA/JPL, and Berwin is making maps and coordinating data for the Web site.

Bowman is working with Slavney to automate hourly updates of the Web page data, eliminating the need to input the data coming from JPL manually. With Slavney, he is writing the computer code for a prototype he helped develop for Arvidson and JPL last year when Arvidson was working on a robotic rover in the Mojave Desert. The robot, called Rocky 7, was used as a test for rovers on the Martian surface.

"The program worked like a charm for the desert test, and throughout November, we worked on creating a new section of code to handle the data we'll get from JPL," Bowman said. "We've run tests since Thanksgiving week with JPL, and things look good. They have to be good because the Web site might receive as much as one million hits a day."

Berwin is generating world maps for the Web site. She will be able to overlay Fossett's position on a global map that will also have information about the demographics, vegetation and natural resources of every region he passes over. The information comes from software packages called ArcWorld and ArcView, which are pre-packaged, full-global data sets.

"The hardest part has been learning the software and seeing how we can incorporate the information into our program," said Berwin. "It's been a time-consuming task. We've been working on it since October, but it's exciting to have a role in the mission."

Niebur will coordinate student schedules for mission control and serve as a liaison between students and mission control. Many of the student volunteers come from the science subgroup of an Arvidson course called "Land Dynamics and the Environment," made possible by a Hewlett Foundation grant.

"We're not sure yet if we will have students who will be at mission control around the clock," said Niebur. "If we do, we may have to arm wrestle to see who gets the midnight-to-six shift."

Bowman plans on graduate school in earth and planetary sciences, possibly at Cornell University. Niebur, who holds a bachelor's degree in aerospace engineering from Georgia Institute of Technology, has three more years in his doctorate program here. And Berwin wants to explore job possibilities in the environmental sciences field after graduation. All three are excited about the upcoming mission.

"My family is excited, although I'm not sure if they know exactly what's involved with my part," said Berwin, who is from St. Paul, Minn., and served this fall as a teaching assistant in Arvidson's Hewlett Program course. "They were very excited this summer when the rover Sojourner Truth began its work on Mars. They knew I was working with Ray and others who have a major role in the Mars missions.

"The balloon mission is a very useful science experience. It takes an adventure and competition and makes it a knowledge-gaining experience, and that's an incredible idea."

— Tony Fitzpatrick

Sports

Compiled by Mike Wolf, asst. athletic director for media relations, and Kevin Bergquist, asst. director, sports information. For the most up-to-date news about Washington University's athletics program, access the Bears' Web site at www.sports-u.com.

Bears second at Lopata

Washington U. came up on the short end of a wild 118-101 shootout with Babson College in the championship game of the 14th Annual Lopata Classic Saturday, Dec. 6, at the WU Field House. Seniors Matt Greear and Nate Philipp were named to the six-player all-tournament team.

Current Record: 2-4 (0-0 UAA)

This Week: 2 p.m. Saturday, Dec. 13, at Murray (Ky.) State University.

Gridders honored

A school-record 16 football players have been named to the 1997 all-University Athletic Association team. Seniors Vernon Butler and Brad Klein were named the UAA's offensive and defensive players of the year. Klein also was tabbed a first-team GTE Academic All-American — the University's ninth student-athlete to be honored with first-team kudos.

Bears finish fourth in NCAA volleyball

Winners of the previous six titles and seven of the last eight NCAA Division III volleyball crowns, WU lost 3-0 in the semifinals to rival Juniata College. In the consolation match, the Bears also fell 3-0 to Central College (Iowa). Juniors Jennifer Martz and Jenny Cafazza were tabbed first-team All-America, with Martz named Division III Player of the Year.

Final Record: 35-8 (12-0 UAA)

Women hoopsters one win shy of best start

WU's women's basketball team has moved to within one victory of its best start in school history, improving to 8-0 after winning the North Central Tournament in Naperville, Ill. Sophomore Alia Fischer netted MVP honors after the 78-52 finals victory. Seniors Amy Schweizer and Angie Kohnen also were named to the all-tourney team.

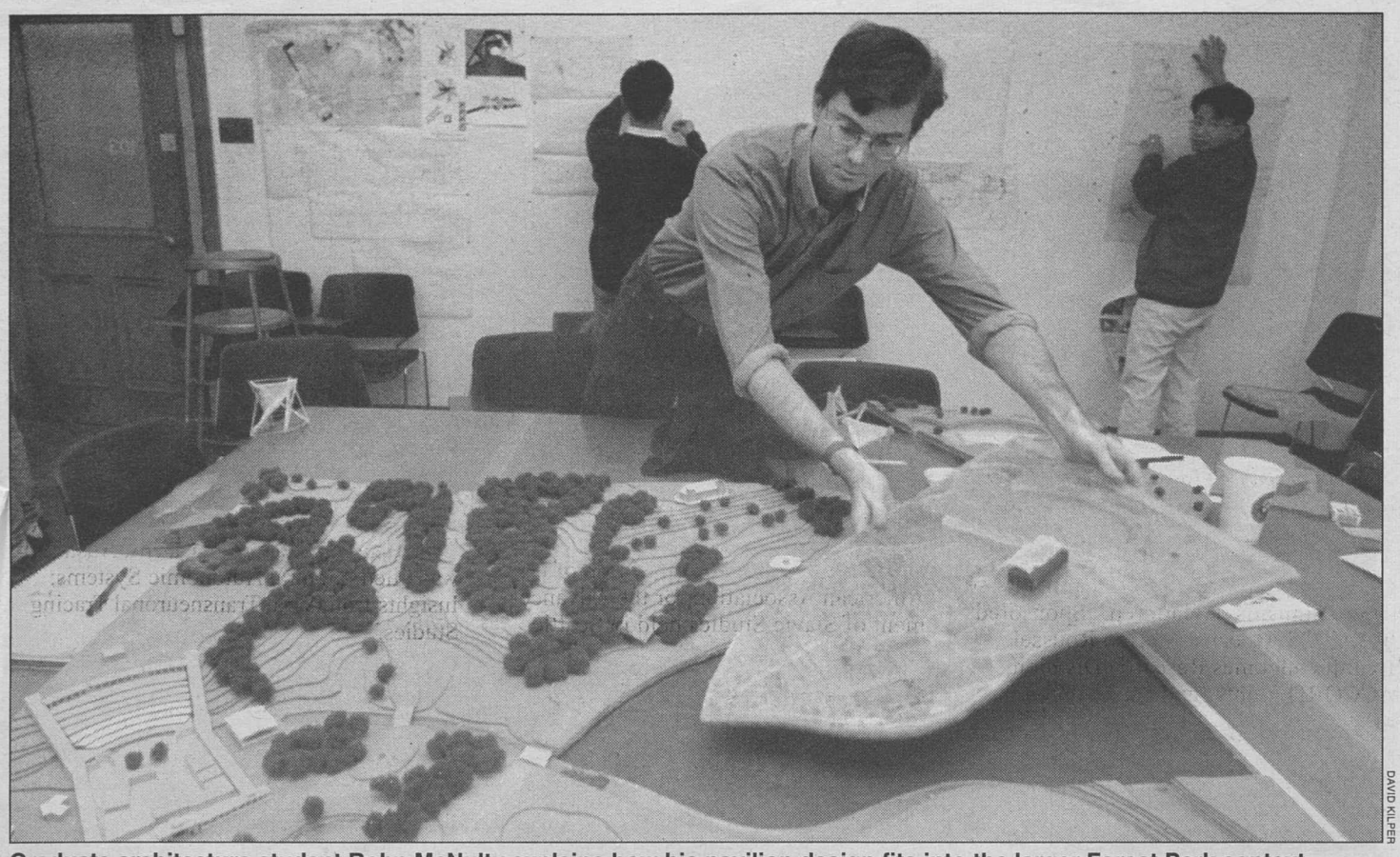
Current Record: 8-0 (0-0 UAA)

This Week: 5:30 p.m. Saturday, Dec. 13, at University of Missouri-St. Louis.

Swimming and diving strong at DePauw

The women's swimming squad finished first of seven teams to remain unblemished on the season, while the men placed third of eight teams at the DePauw University Invitational. Senior Anne Schluter broke the school record in the 100 backstroke (1:02.52).

Current Record: women (5-0); men (4-2)



DAVID KILPER

Graduate architecture student Rohn McNulty explains how his pavilion design fits into the larger Forest Park context.

Designing Forest Park pavilions for the new millenium — *from page 1*

ties. When you look through my bridge, it is like moving through a surreal space — there are so many different axes."

In addition to exploring new building materials, the students strove to incorporate new technology, including the use of photovoltaics as an energy source and liquid-crystal display technology for exhibits within the pavilions. They also studied the historic use of pavilions, from the 1851 Crystal Palace in England to the futuristic 1994 British pavilion in Seville, Spain. Additionally, the students used research and computer programs to analyze the site of the 1904 fairgrounds in Forest Park, including its climatic conditions, topography, existing elements and site orientation.

During a midterm review that included comment from representatives of the St. Louis architectural firm HOK, students struggled with balancing the use of cutting-edge technology, the role of culture in architectural design, their structures' interaction with the site and the pavilions' function.

Graduate student Manuel Lamboy reconciled these issues with a series of exhibit halls that also makes a statement architecturally about moving through time and space. His three 400-foot-long interconnected buildings resemble enclosed ramps jutting up into space. His structure, which draws energy from photovoltaics, connects directly with the site through observation decks looking out onto the park.

"I wanted to make a place that speaks about significant moments in time," he said. "I created a distinct space for historical exhibits about 1904 that would ramp up to a mediating space that then ramps up to an exhibit of the future."

Graduate student Frances Bonet's designs combine tensegrity and photovoltaic technology directly with elements in the park. Her spiraling ramp leads from the existing 1904 pavilion to her new 2004 pavilion. "It's like yoga — you go through an entire journey," she said.

— Ann Nicholson

Course teaches architects writing and speaking skills

While graduate architecture students spend much of their academic careers creating visual solutions for design problems, a new course this fall stressed the importance of another form of expression — verbal communication.

Taught by Stephen Kliment, FAIA, a renowned architectural writer, editor, consultant and critic, the course focused on the basic principles of lucid writing and clear speech. Kliment also offered tips on writing for impact and speaking with conviction.

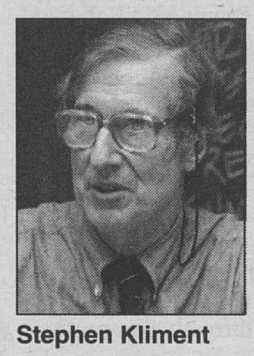
"A critical attribute of the enlightened, well-rounded, successful architect is the ability to express himself or herself effectively through writing and speech," said Kliment, former editor-in-chief of Architectural Record and author of the book "Creative Communications for a Successful Design Practice."

"So much of the focus of architectural education is the studio experience with its emphasis on design, but once students enter practice, they will need to know how to write proposals, client and in-house correspondence and memoranda, e-mail, planning and feasibility reports, articles for the media and marketing and promotional materials," he added.

Kliment's course was part of a new approach in the architecture curriculum of integrating writing skills directly into a variety of graduate and undergraduate courses, said James Harris, associate professor of architecture. At the undergraduate level, the school also now requires freshmen to take English composition, sophomores to enroll in an architectural history course with a strong writing emphasis and juniors to tie writing skills directly into the design exploration process, he said.

In the junior-year studios, affiliate lecturer Kylie Hansen, who received a doctorate in English and American literature from the University in 1996, worked with 51 juniors on various writing assignments related to their design projects to help them expand their focus beyond drawing and modeling. The students' writing assignments ranged from formally analyzing a building to focusing on how people interacted with it.

"The intent of the writing component was to assist students in externalizing their ideas through writing — to use writing as a design tool," said Iain Fraser, professor of architecture, who taught one of the junior-year studios. "It was a way of giving students a basis of envisioning and imaging through a medium with which they are already fairly adept and helping them gain the capacity to prepare their thoughts and make them articulate when presenting their work to reviewers or future clients."



Stephen Kliment

Kliment's assignments included a 1,000-word article suitable for publication in a leading architectural magazine and an impassioned, three-minute presentation based on impressions of buildings the 35 students had viewed and then written about.

Kliment's writing tips ranged from creating a short headline that crystallizes the premise to lopping off the typically rambling first paragraph to get to a lead with some punch to avoiding jargon and using "simple, concrete, sparkling words to equip descriptions with a sense of immediacy." He also offered insights about condensing ideas into statements that are full of expression, detail and meaning and enriching description by means of assessment and analysis.

"The premise of the whole class was to teach people who deal with visual work how verbally to describe that work and how to articulate their thoughts," said graduate student Leona Ketterl, whose essay focused on a little-known Frank Lloyd Wright house near Buffalo, N.Y.

"It's actually an ugly house, but there is an effort under way to restore it," she said. "I wanted to write something that would generate interest, so people would feel strongly about the need to preserve it. He [Kliment] helped me focus on why I was writing the piece and how to express what was different about the house's designs that made it worth restoring."

Japanese graduate student Hisanori Mitsui said he found the class intriguing since English is not his first language, and discovered that many of the suggestions were applicable regardless of the language used. For example, one exercise, which involved students sharing their emotional reactions to buildings in a slide presentation, helped them better understand the "essence" of the buildings, from their perceptions of coldness or warmth to what they enjoyed about the structures, he said.

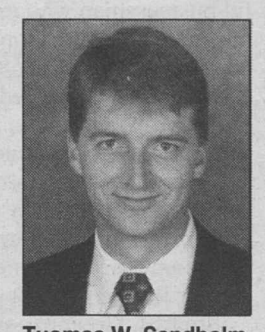
"I tried to keep that in mind when I was describing the Church-on-the-Water in Japan that I visited this summer," he said. "I wrote about it as if the person had never been there and described the building in impressions, as if the person were moving through it. It made it a lot easier to describe and evaluate the building."

— Ann Nicholson

Computer coalitions may make life simpler

Taxicab routers, college registrars and contractors struggling to coordinate dozens of subcontractors on major construction projects are just a few of the potential beneficiaries of innovative Washington University research in computer science.

Tuomas W. Sandholm, Ph.D., assistant professor of computer science, has received a $456,000 CAREER grant from the National Science Foundation (NSF) to support his research in computational coalition formation.



Tuomas W. Sandholm

Automated coalition formation holds promise of help in widely disparate settings, including:

- taxi or delivery truck routing among independent dispatch centers;
- planning and scheduling among manufacturers in subcontracting networks;
- scheduling patient treatment across hospitals;
- classroom and meeting scheduling;
- electronic trading of equities; and
- electronic commerce over the Internet.

The full title of the NSF program granting the award is Faculty Early Career Development Program. This highly selective program is intended to help outstanding new faculty establish research and teaching programs.

Sandholm's research will help harness the efficiency of companies and individuals by developing methods for software "agents" to represent various parties and automatically form dynamic coalitions to coordinate decisions. Through these short-term coalitions, the agents organize themselves to match the problem at hand. Coalitions take advantage of economies of scale when available but never suffer the opposite effect, "diseconomies" of scale.

Through coalition formation, companies and individuals are able to save operations costs and time. The software agents coordinate action within a coalition, but don't interact with agents in other coalitions.

Sandholm's agenda is to apply game theory tools to settings where the agents do not have unlimited computation at their disposal. It will involve extending the theory of coalition formation among various "self-interested" strategic agents, designing algorithms that are viable among these agents and building systems to use the algorithms. The algorithms are mathematical programs that make up the software agents negotiating on behalf of their real-world counterparts.

Sandholm came to Washington University in fall 1996. He holds degrees from the University of Massachusetts, Amherst, and Helsinki University of Technology, Finland. *– Tony Fitzpatrick*

Campus Watch

The following incidents were reported to the University Police Department from Dec. 1–7. Readers with information that could assist the investigation of these incidents are urged to call 935-5555. This release is provided as a public service to promote safety awareness on campus. Campus Watch now is available on the University Police Web site at http://rescomp.wustl.edu/~wupd.

Dec. 1

11:32 a.m. — A student reported the theft of a laptop computer valued at $2,000 from a locked suite in Myers Residence Hall.

11:15 p.m. — A student reported the theft of a wallet containing keys, personal identification and a debit card. Charges were subsequently made on the debit card, and an investigation continues.

Dec. 2

8:53 p.m. — A student reported the theft of a cellular telephone valued at $300 from the multipurpose room in Wydown Residence Hall.

Dec. 3

1:30 p.m. — University Police arrested a nonstudent for trespassing after observing the subject in a parked car on the south side of South Brookings Hall. The subject had been warned previously against returning to the campus. The case was turned over to the St. Louis County Bureau of Justice Services.

3:15 p.m. — A transportation employee reported that the driver of a vehicle the employee had ticketed on the tennis court parking lot pursued the employee in the vehicle, apparently attempting to strike the employee. The employee jumped out of the way and avoided injury. An investigation continues.

University Police also responded to one additional report of theft, one report of sexual misconduct and one report of vandalism.

Introducing new faculty members

The following are among the new faculty members on the Medical Campus. Others will be introduced periodically in this space.

David W. Keetch, M.D., assistant professor of surgery in the division of urologic surgery and chief of staff of Barnes West Hospital, previously served as an instructor of urologic surgery at the School of Medicine and has been the co-director of the school's Urology House Staff Training Program since 1993. He received a bachelor's degree in biology in 1983 from Utah State University and a medical degree from the University of Utah School of Medicine in 1987. He completed residencies in surgery and urologic surgery at Washington University School of Medicine. His research interests include the detection and treatment of prostate cancer.

Linda J. Sandell, Ph.D., professor of orthopaedic surgery and of cell biology and physiology, also is the director of research in the Department of Orthopaedic Surgery. She previously served as a professor of orthopaedics and of biochemistry at the University of Washington. She received a bachelor's degree in biology from Denver University in 1969 and a doctorate from Northwestern University in 1980. She conducted postdoctoral research in molecular biology at the University of Chicago. Sandell is on the board of directors of the Orthopaedic Research Society and the Shriner's Research Advisory Board. Her areas of interest include the development of cartilage and bones.

For The Record

For The Record contains news about a wide variety of faculty, staff and student scholarly and professional activities.

Of note

Benjamin Littenberg, M.D., associate professor of medicine, and **Jane Garbutt,** M.D., fellow in general medical sciences, were awarded one of five 1997 ACCORD grants by Hoechst Marion Roussel at the recent Society for Medical Decision Making awards banquet in Kansas City, Mo. The grant will fund a study titled "A Comparison of Antibiotic Treatments for Acute Sinusitis in Children." Sponsored by the U.S. Hoechst Marion Roussel Health Outcomes Research Division, ACCORD grants fund health outcomes research projects that focus on cardiovascular diseases, neurosciences, oncology, respiratory diseases, endocrinology, rheumatology and infectious diseases. …

Derek P. Morgan, statistical data analyst in the division of biostatistics, received an "Outstanding Speaker" award at the annual meeting of the Midwest SAS Users Group in September. This group shares ideas on using Statistical Analysis System software to organize and analyze research data. Morgan's presentation was titled "A Bag of FSEDIT Tricks." He also has been named co-chair of the 1998 MidWest SAS Users Group conference in St. Louis.

On assignment

Lee Epstein, Ph.D., professor and chair of political science in Arts and Sciences, and **John D. Sprague,** Ph.D., professor of political science, served as panel chairs at the 93rd annual meeting of the American Political Science Association held in Washington, D.C. Epstein chaired a panel on "The Law and Courts Lifetime Achievement Award," while Sprague chaired "Meet the Author: Gary King's 'A Solution to the Ecological Inference Problem: Reconstructing Individual Behavior from Aggregate Data.'" …

Max J. Okenfuss, Ph.D., associate professor of history in Arts and Sciences, organized a panel on the relationship between Montesquieu and Catherine II of Russia and delivered a paper titled "Catherine, Montesquieu and the State" at the 1997 National Convention of the American Association for the Advancement of Slavic Studies held in Seattle. Okenfuss also delivered a public lecture titled "Catherine, Conversationalist, Collector, Patron" to introduce The Saint Louis Art Museum's exhibition, "British Art Treasures from the Russian Imperial Collections in the Hermitage."

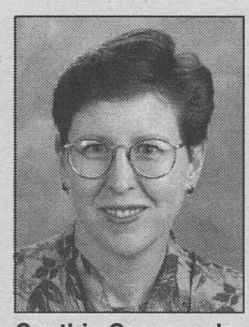
Speaking of

Arthur D. Loewy, Ph.D., professor of anatomy and neurobiology, gave the inaugural lecture to the International Society for Autonomic Neuroscience. The lecture, presented in Cairns, Australia, was titled "Central Autonomic Systems: Insights from Viral Transneuronal Tracing Studies."

Csernansky named associate dean in the College of Arts and Sciences

Cynthia Csernansky has been named associate dean and chief health professions adviser in the College of Arts and Sciences, effective Oct. 20, 1997, according to James E. McLeod, vice chancellor for students and dean of the College of Arts and Sciences.

Csernansky, who had been the University's associate director of corporate and foundations relations for medical alumni and development programs since July 1996, will assume some of the responsibilities of Associate Dean Sharon Stahl, who also is taking on additional duties.


Cynthia Csernansky

In her new role, Csernansky will be responsible for all pre-medical and other health professional advising. In addition, she will develop a new program to connect undergraduates collegewide with research opportunities, both academic and community-based, designed to enrich their University experience.

A new Web site for students interested in the health professions is currently under construction. Also planned is a fall seminar series exploring career paths for pre-health professional students.

"Research opportunites are common for students in the sciences," Csernansky said, "but not for students majoring in economics, English or art. We will try to connect students with a professor who is writing a book or with an area business. The students will gain experience to help them decide what to do with their majors."

Csernansky worked as a postdoctoral fellow in the School of Medicine from 1991-95 and was a research associate in the Department of Neurology from 1995-96. She has co-authored more than 30 publications.

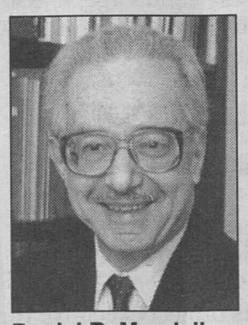
She received a doctorate in pharmacology in 1991 from Stanford University, where she also earned a bachelor's degree in human biology with University Honors in the Humanities in 1982.

News Analysis

News Analysis contains excerpts from the For Expert Comment service. The service, which provides timely faculty comments to media across the country, is distributed by the Office of University Communications.

U.S. House of Representatives bill needed to clarify landowner compensation rights

***Daniel R. Mandelker,** LL.B., J.S.D., the Howard A. Stamper Professor of Law, recently testified before the Subcommittee on Courts and Intellectual Property of the U.S. House Committee on the Judiciary. Mandelker spoke in support of H.R. 1534, a bill that would revise the "ripeness rules" — rules that determine when a property owner can sue for compensation in land-use cases in federal courts. The bill is based on an amicus brief Mandelker co-authored last winter in a U.S. Supreme Court case. The bill, which passed in the U.S. House of Representatives by a margin of 70 votes, is now before the Senate Judiciary Committee.*


Daniel R. Mandelker

Mandelker, an expert on zoning and land-use planning, believes House Bill 1534 would rightfully benefit "aggrieved" landowners by affording them access to the federal courts when they "suffer from unconstitutional government conduct."

"The Fifth Amendment prohibits the federal government from 'taking' private property for public use unless the affected property owner is paid 'just compensation,'" said Mandelker, who has written 16 books and numerous articles on land-use law.

"The restrictions of the 'takings' clause apply to state and local governments through the 14th Amendment," he continued. "The Constitution thus operates under the presumption that all levels of government can regulate private property for public purposes — such as zoning; environmental preservation; or any other reason to protect the safety, health and welfare of the community."

However, Mandelker believes that government regulation for a public purpose can go too far. The "takings" clause aims to prevent the government from forcing property owners to bear alone something that should be a public burden, he said.

"Government regulation requires the payment of just compensation if the 'taking' does not substantially advance a legitimate state interest or denies an owner economically viable use of his or her land," Mandelker said.

According to Mandelker, before property owners can bring a "takings" claim seeking compensation against the government, they must meet criteria established by the U.S. Supreme Court ensuring the case is "ripe."

Mandelker believes the House bill, which aims to improve avenues of access to federal courts, is necessary because the lower courts' applications of the Supreme Court's "ripeness" test are "riddled with obfuscation and inconsistency."

"The 'ripeness' opinions are in such disarray that federal judges and landowners need some objective criteria so that all parties know, up front, the point at which a government land-use decision becomes final," he said. "I believe that H.R. 1534 goes a long way to achieve that objective in a manner that is fair to both property owners and government officials."

(Mandelker's testimony is on the House Judiciary Committee Web site at http://www.house.gov/judiciary/)

Obituaries

Wallace L. Jones, head of minority consortium

Wallace L. Jones, Ph.D., recently retired head of the Consortium for Graduate Study in Management, died of a heart attack Dec. 2, 1997, at his home in Chillicothe, Ohio. He was 63.

Jones joined the consortium in 1967 shortly after the non-profit organization, which provides merit-based full-tuition scholarships to minority MBA students, was founded. Over the course of 30 years, Jones rose from associate director to executive director and, in March 1990, to chief executive officer. He retired from the top position last January.

"Wally worked with the founders of the organization 30 years ago to make it a reality," said his successor Phyllis Buford, Ph.D. "Many called him the 'Father of the Consortium.' Since the beginning, his contributions to fund raising, recruitment, admissions and placement were equal[ly] the passion, humor, care and wisdom he brought to each encounter. He touched nearly every facet of the organization in his special way to make it the highly effective resource for talented minorities it is today."

Before joining the consortium, he was director of the Educational Advisory Center at Howard University in Washington, D.C., where he earned a master's degree. Jones received a doctorate from Washington University in 1990.

Funeral services were held Monday, Dec. 8, in Chillicothe, Ohio.

Memorial contributions may be made to the Wallace L. Jones Fellowship Fund, Consortium for Graduate Study in Management, 200 S. Hanley Rd., Suite 1102, St. Louis, MO, 63105.

Car accident claims lives of two research assistants

Hours after enjoying a uniquely American Thanksgiving dinner with a group of friends and colleagues, Russian citizens Nikolai Chitaev, Ph.D., and Aleksandr Averbakh, Ph.D., both research assistants in the Department of Dermatology, died in a one-car accident.

Chitaev, 34, died Nov. 28, 1997, after his 1987 Jaguar slid on wet pavement and struck a tree in the 5200 block of Forest Park Parkway around 2:30 a.m.

Averbakh, 33, died Dec. 2, 1997, from injuries sustained in the accident.

Both men worked under Sergey Troyanovsky, Ph.D., assistant professor of medicine (dermatology).

"I loved Nikolai and Aleksandr, who were not only brilliant scientists, but also my personal friends," Troyanovsky said. "I am still in shock and always will miss them."

Chitaev had worked in the dermatology lab since July 1994. Averbakh arrived in January 1997.

"Nikolai and Aleksandr both were very well-liked," said Rosemarie Brannan, division administrator in dermatology. "Often personnel from other laboratories and other departments would come to them for advice. They were bright, creative, dedicated, hard-working individuals. It was not unusual for them to still be working in the lab at two, three or four in the morning."

A memorial service for Averbakh was held Friday, Dec. 5. Memorial plans for Chitaev are pending. Both will be returned to their Russian homeland for burial.

Opportunities & personnel news

Hilltop Campus

Information regarding these and other positions may be obtained in the Office of Human Resources, Room 130, at West Campus. Job openings may be accessed via the World Wide Web at cf6000.wustl.edu/hr/home. If you are seeking employment opportunities and are not currently a member of the Washington University staff, you may call our information hotline at 935-9836. Staff members may call 935-5906.

Workers Compensation Insurance Assistant 980138 (part-time). *Insurance.* Requirements: high school diploma; typing skills (50 wpm); four years experience in administrative assistant or secretary position with gradually increasing responsibilities; insurance background preferred; ability to prioritize work assignments and projects to meet deadlines, with emphasis on detail and accuracy; strong sense of design and layout of spreadsheets and other business documents; customer oriented with excellent interpersonal and communication skills; ability to communicate directives and procedures clearly, verbally and in writing; ability to handle customer inquiries effectively and to maintain confidential information and documents.

IRS Audit and Tax Manager 980157. *Accounting Services.* Requirements: bachelor's degree with a major concentration in accounting; CPA preferred; knowledge of IRS regulations and experience in preparation of tax returns for a not-for-profit organization; working knowledge of WordPerfect or other word processing software; knowledge of database management software.

CFU Accountant 980163. *Accounting Services.* Requirements: bachelor's degree, master's preferred; CPA preferred; excellent interpersonal skills; service orientation; accessibility; team player; experience with PCs and proficiency in word processing, spreadsheet and database management software applications; ability to meet deadlines with varying degrees of pressure; ability to handle confidential information responsibly; excellent communication skills, written and verbal; knowledge of internal controls and various accounting system applications; ability to research and automate transaction processing and recording.

Sales Associate 980165 (part-time). *Women's Society.* Requirements: high school diploma; one to three years cashiering/sales experience; detail oriented with a high degree of accuracy; good interpersonal skills, customer orientation and customer relations; ability to stand, lift, display merchandise; weekend availability. Flexible hours.

Clinical Program Coordinator 980166. *School of Law.* Requirements: some college, bachelor's preferred; experience in IBM compatible computers and WordPerfect software and databases; typing skills (50 wpm); excellent verbal and written communication skills and strong interpersonal and management skills; strong organizational skills; experience in a legal setting preferred; supervisory experience preferred; ability to work independently and use good judgment; ability to work simultaneously with multiple projects. Clerical testing required.

Telephone Billing/AFSA Liaison 980169. *Accounting Services.* Requirements: associate's degree or equivalent with emphasis in accounting and/or three to five years experience in accounting-related field; working knowledge of office equipment, including personal computer and related software (Excel and Word), calculator and mainframe system; ability to manage and prioritize multiple tasks; motivation; ability to think analytically; strong organization, communication and business management skills.

Payroll Systems Coordinator 980170. *Accounting Systems.* Requirements: hands-on experience with a computer payroll system and developing training materials; experience in reporting on payroll processes for audit purposes; ability to calculate pay from gross to net; good communication skills; excellent customer service skills and training skills; ability to assist in implementing and documenting new software; ability to run audit reports against payroll system; ability to create PC-based spreadsheet reports; initiative; ability to learn new applications quickly and document/train other users.

Bookstore offers benefits, discounts

There's more that's new about the Washington University Campus Store than its management.

Since Nov. 10 when Follett College Stores took over the management of the bookstore in Mallinckrodt Center, several new advantages for faculty, staff and students have been instituted.

Departments, faculty and staff now receive a 20 percent discount on general and bargain books, school and art supplies, clothing and gifts and a 10 percent discount on calculators. Faculty and staff also get 10 percent off the price of course books.

During the first annual Faculty and Staff Appreciation Day, which was held Dec. 3, the 20 percent discount was raised to 30 percent.

In addition, Follett will award $5,000 in textbook scholarships each year. The funds for course books and school supplies will be divided among several students. Although details have yet to be worked out, the first scholarships are expected to be awarded for the spring 1998 semester, said store manager Betsy Gaire.

The store's official grand opening will take place next summer when physical improvements to the store are complete. The remodeling will include connecting the upper and lower levels of the store, expanding the general book area and retail space and adding a café with a small seating area.

The store also plans to expand its selection of journals and to bring in new lines of school supplies and clothing, Gaire said.

Follett College Stores is the largest contract manager of college bookstores in the United States and Canada. The company serves more than 3 million students, 250,000 faculty and more than 550 institutions of higher education.

W-2 forms to be mailed to employees' homes

The vendor who prints W-2 forms for Washington University will mail the forms directly to employees' homes again this year. W-2 forms will not go to departments for distribution, as was the case before last year.

It is important that University employees review their most recent paychecks to ensure that their home addresses are current and accurate. If an address is not correct, the employee should contact the payroll representative in his or her department immediately.

For more information, call Susan Wines, manager of shared payroll services, at 935-4789.

United Way drive tops $360,000

For the third year in a row, Washington University's United Way Campaign has surpassed its pledge goal.

To date, the annual fund drive for the United Way of Greater St. Louis has yielded pledges totaling $360,973. The two-month campaign officially ended Nov. 10, but more pledges expected this month should help surpass the $360,000 goal by as much as $10,000, said Clarence C. Barksdale, the University's campaign coordinator and vice chairman of the Board of Trustees.

"It was an excellent campaign," Barksdale said. "We're thankful to the Washington University community for being so supportive of the United Way."

The Universitywide participation level was 22 percent. West Campus met its ambitious goal of 45 percent, more than doubling its participation level from two years ago.

A variety of innovative incentives encouraged participation throughout the University, said Ann Prenatt, director of employee relations and human resource management. One department held a garage sale to raise funds, others raffled off donated items to participants, and speakers from the United Way came to campus to educate people about the organization.

"A lot of personal attention from our campaign workers has really been very effective," Prenatt said. "I would like to thank our campaign workers for their assistance in making this a successful campaign."

United Way contributions benefit more than 140 agencies serving the greater St. Louis metropolitan area. Through the United Way's support of health and human services, one out of three people in the Missouri and Illinois portions of greater St. Louis is helped. The primary targets of United Way funds are youth development and recreation, basic needs, health care, education, the elderly and children.

The United Way operates with low fund-raising and administrative costs. Last year, the organization allocated 92 cents of every dollar to support St. Louis programs and services. — *Martha Everett*

Saturday child care now being offered

The St. Louis Children's Hospital (SLCH) Child Development Center now is offering child care on Saturdays for children of BJC Health System and Washington University employees. For a $25 registration fee, children ages 6 weeks through 10 years can receive care from 6 a.m. to 8 p.m.

"We are offering the service as an additional convenience for BJC and WU employees," said Rosalyn Kleinberg, team leader of the SLCH Child Development Center. "During the busy holiday shopping season, it might be a nice break to drop your child off for part of the day."

Fees range from $15 to $20 for a half day, depending on the child's age, to $30 to $40 for a full day. For more information, call 454-4700.

Trustees meet Dec. 5, name Jerome Sincoff as Shepley Trustee

Meeting Friday, Dec. 5, the Washington University Board of Trustees elected Jerome J. Sincoff, FAIA, as an Ethan A.H. Shepley Trustee. Sincoff is president and CEO of Hellmuth, Obata & Kassabaum Inc. (HOK), one of the largest architectural firms in the world. The trustees focused on a number of other issues as well, according to Chancellor Mark S. Wrighton.

Sincoff will serve a four-year term as a Shepley Trustee, a position named in honor of Ethan A.H. Shepley, a former chancellor and board chairman at the University. Shepley Trustees exemplify qualities of high character, proven leadership and devoted service to the University.

In other action, the trustees authorized the board's Executive Committee to set 1998-99 undergraduate tuition on the Hilltop campus at its regular January meeting. The trustees also discussed School of Medicine tuition for students entering the program in fall 1998; a final determination will be made soon.

Trustees approved a memorial resolution in honor of the late W.L. Hadley Griffin, who died Nov. 9, 1997, after serving on the board for nearly 30 years. He was board chairman from 1983 to 1988 and vice chairman for six years prior to that. It was during his term as chairman that the University completed the record-breaking $630 million Alliance campaign.

In his remarks to the trustees, Wrighton:

- Expressed a special note of "thanksgiving" for the generous pledge of $100 million from the Danforth Foundation and for an additional gift of $15 million from the Emerson Foundation and Charles F. Knight.
- Noted that applications for the fall 1998 freshman class are higher for the fifth consecutive year, that early decision applications also are up and that the number of students and parents visiting campus has continued to climb. Last year, the University received nearly 14,000 applications for undergraduate admission.
- Gave particular note to the development of a policy on the participation of women and minorities in construction projects at a rate that would at least equal the population profile of the St. Louis metropolitan area. Progress in this effort will be measured in terms of the dollar volume on contracts issued to firms from both the Women Minority Enterprise and the Minority Business Enterprise, as well as by the numbers of minority and women workers on the projects themselves. The University will be preparing an announcement on the details of this effort soon.
- Announced that he had appointed an advisory committee on the search for a new dean of the School of Law, to be chaired by Kathleen Brickey, J.D., the James W. Carr Professor of Criminal Jurisprudence in the law school.
- Reviewed changes in management for the bookstore; new department head appointments in the School of Medicine; efforts to encourage greater, more focused research on plant science; and the outcome of current MetroLink activities.
- Gave progress reports on construction of new residence halls on the South Forty and of Goldfarb Hall at the George Warren Brown School of Social Work.

Wrighton noted that the trustees' meeting was being held for the first time in the newly restored and refurbished Holmes Lounge — a room that originally served as the University's library reading room.

The trustees received reports on the University's interest in the international community and Asia, medical school finances, research and graduate student affairs, undergraduate student affairs, development, alumni board of governors and educational policy.

Jerome J. Sincoff

Sincoff has been associated with HOK since 1962 and has participated in all areas of architectural services, including master planning, programming, design, construction documents and construction administration. As president and chief executive officer, he is a member of HOK's executive committee, which guides the firm's overall corporate goals and development.

He has served as project executive for large-scale projects, including the National Air and Space Museum in Washington, D.C. Other projects developed under his leadership include the One Bell Center building in St. Louis, BP Corporate America Headquarters in Cleveland, One Civic Center Plaza in Denver and the St. Louis Union Station preservation and renovation.

In addition to his work with HOK, Sincoff has been active in numerous professional and community organizations. He is a co-founder of the American Institute of Architects' Large-Firm Round Table, a member of the construction industry's President's Forum and treasurer of The Saint Louis Art Museum's Board of Commissioners.

Sincoff is an active volunteer for the School of Architecture and for the University, serving as a member of the William Greenleaf Eliot Society Committee, the architecture school's advisory board and, currently, the school's National Council. In addition, Sincoff has served as executive chair of the 40th reunion of the Class of 1956 and chairman of the Alumni Board of Governors. He received a bachelor of architecture degree from the University in 1956.